AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-15 (cancelled).

16. (New) A micromechanical sensor, comprising:

a substrate;

an external oxide layer formed in a laterally external area in the substrate;

a diaphragm having multiple perforation holes formed in a laterally internal diaphragm area; and

a cavern etched in the substrate beneath the diaphragm;

wherein the diaphragm is suspended in a suspension area of the external oxide layer, which tapers toward connection points of the diaphragm, and the diaphragm is situated in its vertical height between a top side of the external oxide layer and a bottom side of the external oxide layer.

17. (New) The micromechanical sensor as recited in claim 16, wherein the external oxide layer tapers in the suspension area toward the connection points at an acute angle.

18. (New) The micromechanical sensor as recited in claim 17, wherein the external oxide layer is one of wedge shape or triangular shape.

19. (New) The micromechanical sensor as recited in claim 16, wherein the cavern extends to beneath the external oxide layer outside of the suspension area.

20. (New) The micromechanical sensor as recited in claim 16, wherein the diaphragm has an internal oxide layer and a nitride layer formed on the internal oxide layer.

21. (New) The micromechanical sensor as recited in claim 16, wherein the diaphragm is formed from an internal oxide layer.

22. (New) The micromechanical sensor as recited in claim 16, wherein the diaphragm is rectangular or round.

23. (New) The micromechanical sensor as recited in claim 16, wherein the diaphragm is situated approximately at a middle vertical height of the external oxide layer.

24. (New) A method for manufacturing a micromechanical sensor, comprising:

creating an internal oxide layer on a substrate;

creating a nitride layer on the internal oxide layer;

structuring the internal oxide layer and the nitride layer so that the internal oxide layer and the nitride layer are preserved in a lateral middle diaphragm area and removed in an external area surrounding the middle diaphragm area;

locally oxidizing the substrate in the external area, creating an external oxide layer which has a greater thickness than a total thickness of a diaphragm layer formed from the internal oxide layer and the nitride layer;

creating perforation holes in the diaphragm layer in the diaphragm area; and

supplying an etching gas that selectively etches the substrate through the perforation holes and creating a cavern in the substrate and a diaphragm above the cavern;

wherein the diaphragm is situated in its vertical height between a top side of the external oxide layer and a bottom side of the external oxide layer and is suspended in a suspension area of the external oxide layer that tapers toward the diaphragm.

25. (New) The method as recited in claim 24, wherein the nitride layer is removed from the diaphragm layer before creating the perforation holes.

26. (New) The method as recited in claim 25, wherein the nitride layer is removed from the diaphragm layer by a wet chemical process.

27. (New) The method as recited in claim 24, wherein a tensile stress is exerted on the external oxide layer during the etching of the cavern .

28. (New) The method as recited in claim 24, wherein the cavern is formed outside of the suspension area beneath the external oxide layer.

29. (New) The method as recited in claim 24, wherein a thermopile structure having at least two conductor areas that are contacted in a contact area and an absorber layer for absorption of infrared radiation are applied to the diaphragm.

30. (New) The method as recited in claim 24, wherein the perforation holes are subsequently sealed.

31. (New) The method as recited in claim 24, wherein a rectangular or round diaphragm is formed.